UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,869	02/21/2002	Felix Chow	004906.P081	9801

7590 10/10/2006

Christian A. Nicholes
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Seventh Floor
12400 Wilshire Boulevard
Los Angeles, CA 90025-1026

EXAMINER	
LEE, ANDREW CHUNG CHEUNG	
ART UNIT	**PAPER NUMBER**
2616	

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/080,869	CHOW ET AL.	
	Examiner	Art Unit	
	Andrew C. Lee	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *10 and 37* is/are allowed.

6)☒ Claim(s) *1-9,11-36 and 38-48* is/are rejected.

7)☐ Claim(s) _ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/23/2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

2. The disclosure is objected to because of the following informalities:

Regarding claims 12, 13, 23, 24, 35, 36, 47, 48, the acronym "MDL" and FDL" do not have any practical meaning by itself. The terms can be interpreted or be translated into different meanings. The terms should be spelled out in full text as disclosed in the Applicant's specification.

Appropriate correction is required.

Claim Objections

3. Claims 12, 13, 23, 24, 35, 36, 47, 48 are objected to because of the following informalities:

The acronym "MDL" and FDL" do not have any substantial weight in the claims. The terms should be spelled out in full text as disclosed in the Applicant's specification. Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Regarding claims 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, the claimed invention is directed to non-statutory subject matter. The claimed invention "machine-readable medium that provides instructions and machine-readable medium" do not fall at the category of patent eligible subject matter recited in 35 U.S.C. 101. The subject matter disclosed "machine-readable medium" is vague and indefinite. Regarding claims 25, and 31, acceptable language in computer-processing related claims should be disclosed as, the subject matter in the preamble " A machine-readable medium that provides instructions that, when executed by a machine, cause the machine to perform operations comprising:" should be corrected as "A computer-readable medium that stores instructions that, when executed by a computer, cause the computer to perform operations comprising:"

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 4, 8, 2, 5, 9, 15, 18, 20, 32, 39, 42, 44, 11, 14, 19, 38, 43, 22, 46, are rejected under 35 U.S.C. 102(e) as being anticipated by Hegde et al. (US 6810031 B1).

Regarding claims 1, 4, 8, Hedge et al. disclose the limitation of a method comprising: transferring data on a first port during a current cycle until a predetermined number of bytes less an overshoot value for the first port has been transferred on the first port (recited "determining an allowable number of data bytes for transmission during a cycle" as transferring data on a first port during a current cycle; Fig. 1, column 15, lines 5 – 6); continuing to transfer data on the first port during the current cycle until a complete packet has been transferred on the first port (recited "maintaining a data byte transmission credit and transmitting during a subsequently cycle" as continuing to transfer data on the first port during the current cycle; column 15, lines 7 – 11); and updating the overshoot value for the first port based on the number of bytes transferred on the first port (recited "update the data byte transmission credit" as updating the overshoot value; column 15, lines 12 – 14).

Regarding claims 2, 5, 9, 15, 18, 20, 32, 39, 42, 44, Hedge et al. disclose the limitation of a method, device, network of claimed wherein the updating of the overshoot value for the first port based on the number of bytes transferred on the first port comprises: upon determining that the number of bytes transferred on the first port is greater than the predetermined number of bytes less the overshoot value for the first port (recited "determining a maximum allowable data byte transmission credit (TCL) for transmitting extra data bytes" as upon determining that the number of bytes transferred on the first port is greater than the predetermined number of bytes less the overshoot value; column 15, lines 51 – 56), setting the overshoot value for the first port to the number of bytes transferred on the first port in excess of the predetermined number less the overshoot value for the first port (recited

"updating current credit balance (CL)" as setting the overshoot value; column 16, lines 1 – 2; recited "credit is preferably provided as a counter" as a first residue counter coupled with the first port to update the overshoot value; column 7, lines 45 – 55).

Regarding claim 11, Hegde et al. disclose the limitation of a method comprising: sequentially selecting a pair of ports from a plurality of pairs of ports wherein the pair of ports comprises a port connected to a first interface and a port connected to a second interface (Fig.1, recited element 102 input ports and output ports line card egress side as sequentially selecting a pair of ports from a plurality of pairs of ports wherein the pair of ports comprises a port connected to a first interface and a port connected to a second interface; column 5, lines 15 – 25); to transferring data on the port connected to the first interface during a current cycle (column 5, lines 19 – 25); and transferring data on the port connected to the second interface during the current cycle (column 5, lines 19 – 30).

Regarding claims 14, 19, 38, 43, Hegde et al. disclose the limitation of an apparatus, network (recited "device for controlling bandwidth distribution" as apparatus; column 3, line 57) comprising: a first port to transfer data during a current cycle until a predetermined number of bytes less an overshoot value for the first port has been transferred on the first port and to continue to transfer data during the current cycle until a complete packet has been transferred on the first port (Fig.1, element 102 line card 0 egress side, recited "determining an allowable number of data bytes for transmission during a cycle" as transferring data on a first port during a current cycle; Fig. 1, column 15, lines 5 – 6; recited "maintaining a data byte

transmission credit and transmitting during a subsequently cycle" as continuing to transfer data on the first port during the current cycle; column 15, lines 7 – 11) and a first residue counter coupled with the first port to update the overshoot value for the first port based on the number of bytes transferred on the first port (recited "credit is preferably provided as a counter" as a first residue counter coupled with the first port to update the overshoot value; column 7, lines 45 – 55).

Regarding claims 22, 46, Hegde et al. disclose the limitation of an apparatus (recited "device for controlling bandwidth distribution" as apparatus; column 3, line 57) comprising: a plurality of pairs of ports wherein a pair of ports comprises a port connected to a first interface to transfer data during a current cycle and a port connected to a second interface to transfer data during the current cycle (Fig.1, element 102 line card 0 egress side, recited "determining an allowable number of data bytes for transmission during a cycle" as transferring data on a first port during a current cycle; Fig. 1, column 15, lines 5 – 6; recited "maintaining a data byte transmission credit and transmitting during a subsequently cycle" as continuing to transfer data on the first port during the current cycle; column 15, lines 7 – 11); and a bandwidth balancing arbiter coupled with the plurality of ports to sequentially select each pair of ports of the plurality of pairs of ports to transfer data during the current cycle (recited "Bandwidth Distribution Protocol (BWDP) provides inputs to the traffic schedulers at the line cards or IPE cards" as bandwidth balancing arbiter coupled with the plurality of ports; column 7, lines 40 – 55).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 3, 6, 16, 40, 45, 7, 17, 21, 41, 25, 28, 26, 29, 27, 30, 31,32, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hegde et al. (US 6810031 B1) in view of Robert et al. (US 6920110 B2).

Regarding claims 3, 6, 16, 40, 45, Hedge et al. disclose the limitation of the method, network of claimed wherein the updating of the overshoot value for the first port based on the number of bytes transferred on the first port (recited "update the data byte transmission credit" as updating the overshoot value; column 15, lines 12 – 14; recited "credit is preferably provided as a counter" as a first residue counter coupled with the first port to update the overshoot value; column 7, lines 45 – 55) comprises: Hegde et al. do not disclose explicitly upon determining that the number of bytes transferred on the first port is not greater than the predetermined number of bytes less the overshoot value for the first port, setting the overshoot value for the first port to zero. Robert et al. disclose the limitation of upon determining that the number of bytes transferred on the first port is not greater than the predetermined number of bytes less the overshoot value for the first port, setting the overshoot value for the first port to zero (recited "If not, the actual usage is sampled again" as the number of bytes transferred on the first port is not greater than the predetermined number of bytes less the overshoot value, 'the threshold is initially set to zero" as setting the

overshoot value for the first port to zero; Fig. 7, column 10, lines 23 – 32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hegde et al. to include a upon determining that the number of bytes transferred on the first port is not greater than the predetermined number of bytes less the overshoot value for the first port, setting the overshoot value for the first port to zero such as that taught by Robert et al. in order to provide a method including the steps of monitoring the level of actual network bandwidth utilization and identifying a maximum monitored level of actual utilization and the method calculating a threshold level (as suggested by Roberts et al., see column 2, lines 17 – 23).

Regarding claims 7, 17, 21, 41, Hedge et al. disclose the limitation of the method, network of claimed wherein the updating of the overshoot value for the first port based on the number of bytes transferred on the first port (recited "update the data byte transmission credit" as updating the overshoot value; column 15, lines 12 – 14; recited "credit is preferably provided as a counter" as a first residue counter coupled with the first port to update the overshoot value; column 7, lines 45 – 55) comprises: Hegde et al. do not disclose explicitly upon determining that a number of bytes transferred on a first port during a current cycle is not greater than a predetermined number of bytes less an overshoot value for the first port and a packet was not transferred by the first port during the current cycle, maintaining the overshoot value for the first port; and upon determining that a number of bytes transferred on a first port during a current cycle is not greater than the predetermined number of bytes less the overshoot value for the first port and a packet was transferred by the first port during the current cycle, setting the overshoot value to zero. Robert et al. disclose the limitation of

upon determining that a number of bytes transferred on a first port during a current cycle is not greater than a predetermined number of bytes less an overshoot value for the first port and a packet was not transferred by the first port during the current cycle, maintaining the overshoot value for the first port (recited "If not, the actual usage is sampled again" as the number of bytes transferred on the first port is not greater than the predetermined number of bytes less the overshoot value; recited "step 130, step 132" actual level < threshold as a packet was transferred by the first port and maintain the overshoot value; Fig. 7, column 10, lines 54 – 62); and upon determining that a number of bytes transferred on a first port during a current cycle is not greater than the predetermined number of bytes less the overshoot value for the first port and a packet was transferred by the first port during the current cycle, setting the overshoot value to zero (recited "If not, the actual usage is sampled again" as the number of bytes transferred on the first port is not greater than the predetermined number of bytes less the overshoot value, 'the threshold is initially set to zero" as setting the overshoot value for the first port to zero; Fig. 7, column 10, lines 23 – 32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hegde et al. to include explicitly upon determining that a number of bytes transferred on a first port during a current cycle is not greater than a predetermined number of bytes less an overshoot value for the first port and a packet was not transferred by the first port during the current cycle, maintaining the overshoot value for the first port; and upon determining that a number of bytes transferred on a first port during a current cycle is not greater than the predetermined number of bytes less the overshoot value for the first port and a packet was transferred by the first port during the current cycle, setting the overshoot value to zero such as that taught by

Robert et al. in order to provide a method including the steps of monitoring the level of actual network bandwidth utilization and identifying a maximum monitored level of actual utilization and the method calculating a threshold level (as suggested by Roberts et al., see column 2, lines 17 – 23).

Regarding claims 25, 28, Hegde et al. disclose the limitation of a device that provides instructions that, when executed by a device (recited "device for controlling bandwidth distribution" as a device; column 3, line 57), cause the machine to perform operations comprising: transferring data on a first port during a current cycle until a predetermined number of bytes less an overshoot value for the first port has been transferred on the first port (recited "determining an allowable number of data bytes for transmission during a cycle" as transferring data on a first port during a current cycle; Fig. 1, column 15, lines 5 – 6); continuing to transfer data on the first port during the current cycle until a complete packet has been transferred on the first port (recited "maintaining a data byte transmission credit and transmitting during a subsequently cycle" as continuing to transfer data on the first port during the current cycle; column 15, lines 7 – 11); and updating the overshoot value for the first port based on the number of bytes transferred on the first port (recited "update the data byte transmission credit" as updating the overshoot value; column 15, lines 12 – 14). However, Hegde et al. do not disclose explicitly a computer-readable medium. Roberts et al. disclose explicitly the limitation of a computer-readable medium (recited "computer-readable medium" as computer-readable medium; column 2, lines 26 – 28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hegde

et al. to include a computer-readable medium such as that taught by Robert et al. in order to provide a method including the steps of monitoring the level of actual network bandwidth utilization and identifying a maximum monitored level of actual utilization and the method calculating a threshold level (as suggested by Roberts et al., see column 2, lines 17 – 23).

Regarding claims 26, 29, Hegde et al. disclose the limitation of a device of claimed wherein the updating of the overshoot value for the first port based on the number of bytes transferred on the first port (recited "update the data byte transmission credit" as updating the overshoot value; column 15, lines 12 – 14) comprises: upon determining that the number of bytes transferred on the first port is greater than the predetermined number of bytes less the overshoot value for the first port (recited "determining a maximum allowable data byte transmission credit (TCL) for transmitting extra data bytes" as upon determining that the number of bytes transferred on the first port is greater than the predetermined number of bytes less the overshoot value; column 15, lines 51 – 56), setting the overshoot value for the first port to the number of bytes transferred on the first port in excess of the predetermined number less the overshoot value for the first port (recited "updating current credit balance (CL)" as setting the overshoot value; column 16, lines 1 – 2; recited "credit is preferably provided as a counter" as a first residue counter coupled with the first port to update the overshoot value; column 7, lines 45 – 55). However, Hegde et al. do not disclose explicitly a computer-readable medium. Roberts et al. disclose explicitly the limitation of a computer-readable medium (recited "computer-readable medium" as computer-readable medium; column 2, lines 26 – 28). It would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Hegde et al. to include a computer-readable medium such as that taught by Robert et al. in order to provide a method including the steps of monitoring the level of actual network bandwidth utilization and identifying a maximum monitored level of actual utilization and the method calculating a threshold level (as suggested by Roberts et al., see column 2, lines 17 – 23).

Regarding claims 27, 30, Hedge et al. disclose the limitation of the device of claimed wherein the updating of the overshoot value for the first port based on the number of bytes transferred on the first port (recited "update the data byte transmission credit" as updating the overshoot value; column 15, lines 12 – 14; recited "credit is preferably provided as a counter" as a first residue counter coupled with the first port to update the overshoot value; column 7, lines 45 – 55). However, Hegde et al. do not disclose explicitly the computer-readable medium of upon determining that the number of bytes transferred on the first port is not greater than the predetermined number of bytes less the overshoot value for the first port, setting the overshoot value for the first port to zero. Roberts et al. disclose explicitly the limitation of a computer-readable medium of upon determining that the number of bytes transferred on the first port is not greater than the predetermined number of bytes less the overshoot value for the first port, setting the overshoot value for the first port to zero (recited "computer-readable medium" as computer-readable medium; column 2, lines 26 – 28; recited "If not, the actual usage is sampled again" as the number of bytes transferred on the first port is not greater than the predetermined number of bytes less the overshoot value, 'the threshold is initially set to zero" as setting the overshoot value for the first port to zero; Fig. 7,

column 10, lines 23 – 32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hegde et al. to include a computer-readable medium of upon determining that the number of bytes transferred on the first port is not greater than the predetermined number of bytes less the overshoot value for the first port, setting the overshoot value for the first port to zero such as that taught by Robert et al. in order to provide a method including the steps of monitoring the level of actual network bandwidth utilization and identifying a maximum monitored level of actual utilization and the method calculating a threshold level (as suggested by Roberts et al., see column 2, lines 17 – 23).

Regarding claim 31, Hedge et al. disclose the limitation of a device that provides instructions that, when executed by a device, cause the machine to perform operations comprising: However, Hegde et al. do not disclose explicitly computer-readable medium upon determining that a number of bytes transferred on a first port during a current cycle is not greater than a predetermined number of bytes less an overshoot value for the first port and a packet was not transferred by the first port during the current cycle, maintaining the overshoot value for the first port; and upon determining that a number of bytes transferred on a first port during a current cycle is not greater than the predetermined number of bytes less the overshoot value for the first port and a packet was transferred by the first port during the current cycle, setting the overshoot value to zero. Robert et al. disclose the limitation of computer-readable medium upon determining that a number of bytes transferred on a first port during a current cycle is not greater than a predetermined number of bytes less an overshoot value for the first port and a packet was not transferred by the first port during the

current cycle, maintaining the overshoot value for the first port (recited "If not, the actual usage is sampled again" as the number of bytes transferred on the first port is not greater than the predetermined number of bytes less the overshoot value; recited "step 130, step 132" actual level < threshold as a packet was transferred by the first port and maintain the overshoot value; Fig. 7, column 10, lines 54 – 62); and upon determining that a number of bytes transferred on a first port during a current cycle is not greater than the predetermined number of bytes less the overshoot value for the first port and a packet was transferred by the first port during the current cycle, setting the overshoot value to zero (recited "If not, the actual usage is sampled again" as the number of bytes transferred on the first port is not greater than the predetermined number of bytes less the overshoot value, 'the threshold is initially set to zero" as setting the overshoot value for the first port to zero; Fig. 7, column 10, lines 23 – 32)It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hegde et al. to include explicitly computer-readable medium upon determining that a number of bytes transferred on a first port during a current cycle is not greater than a predetermined number of bytes less an overshoot value for the first port and a packet was not transferred by the first port during the current cycle, maintaining the overshoot value for the first port; and upon determining that a number of bytes transferred on a first port during a current cycle is not greater than the predetermined number of bytes less the overshoot value for the first port and a packet was transferred by the first port during the current cycle, setting the overshoot value to zero such as that taught by Robert et al. in order to provide a method including the steps of monitoring the level of actual network bandwidth

utilization and identifying a maximum monitored level of actual utilization and the method calculating a threshold level (as suggested by Roberts et al., see column 2, lines 17 – 23).

Regarding claim 32, Hegde et al. disclose a device that provides instructions that, when executed by a device, cause the machine to perform operations comprising: upon determining that a packet may be transferred on a first port during a current cycle, transferring data on the first port during the current cycle until a predetermined number of bytes less an overshoot value for the first port has been transferred on the first port (recited "determining an allowable number of data bytes for transmission during a cycle" as transferring data on a first port during a current cycle; Fig. 1, column 15, lines 5 – 6); upon determining that a packet has been partially transferred on the first port during the current cycle, continuing to transfer data on the first port during the current cycle until a complete packet has been transferred on the first port (recited "maintaining a data byte transmission credit and transmitting during a subsequently cycle" as continuing to transfer data on the first port during the current cycle; column 15, lines 7 – 11); and updating the overshoot value for the first port based on the number of bytes transferred on the first port (recited "update the data byte transmission credit" as updating the overshoot value; column 15, lines 12 – 14). However, Hegde et al. do not disclose explicitly a computer-readable medium. Roberts et al. disclose explicitly the limitation of a computer-readable medium (recited "computer-readable medium" as computer-readable medium; column 2, lines 26 – 28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hegde et al. to include a computer-readable medium such as that taught by Robert et al. in order to provide a method including the steps of monitoring the level of actual network bandwidth utilization and identifying a maximum

monitored level of actual utilization and the method calculating a threshold level (as suggested by Roberts et al., see column 2, lines 17 – 23).

Regarding claim 34, Hegde et al. disclose the limitation of a device that provides instructions that, when executed by a device, cause the machine to perform operations comprising: sequentially selecting a pair of ports from a plurality of pairs of ports wherein the pair of ports comprises a port connected to a first interface and a port connected to a second interface (Fig.1, recited element 102 input ports and output ports line card egress side as sequentially selecting a pair of ports from a plurality of pairs of ports wherein the pair of ports comprises a port connected to a first interface and a port connected to a second interface; column 5, lines 15 – 25); transferring data on the port connected to the first interface during a current cycle (column 5, lines 19 – 25); and transferring data on the port connected to the second interface during the current cycle (column 5, lines 19 – 25). However, Hegde et al. do not disclose explicitly a computer-readable medium. Roberts et al. disclose explicitly the limitation of a computer-readable medium (recited "computer-readable medium" as computer-readable medium; column 2, lines 26 – 28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hegde et al. to include a computer-readable medium such as that taught by Robert et al. in order to provide a method including the steps of monitoring the level of actual network bandwidth utilization and identifying a maximum monitored level of actual utilization and the method calculating a threshold level (as suggested by Roberts et al., see column 2, lines 17 – 23).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 12, 23, 35, 47, 13, 24, 36, 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hegde et al. (US 6810031 B1) and Robert et al. (US 6920110 B2) as applied to claims above, and further in view of Carr et al. (US 5751802).

Regarding claims 12, 23, 35, 47, Hegde et al. and Robert et al. fail to disclose the method, apparatus and network of claimed wherein one pair of ports of the plurality of pairs of ports comprises a port reserved for MDLs and a port reserved for FDLs. Carr et al. disclose the limitation of the method, apparatus and network of claimed wherein one pair of ports of the plurality of pairs of ports comprises a port reserved for MDLs (Fig. 1, Fig. 2, element 5, loop Maintenance operation system as a port reserved for MDLs) and a port reserved for FDLs (Fig. 1 and Fig. 2, element 7, loop facility assignment control system as a port reserved for FDLs; column 5, lines 29 – 38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hegde et al. and Robert et al. to include method, apparatus and network of claimed wherein one pair of ports of the plurality of pairs of ports comprises a port reserved for MDLs and a port reserved for FDLs. such as that taught by Carr et al. in order to provide arrangements for provisioning service for a telecommunications customer (as suggested by Carr et al., see column 1, lines 10 –11).

Regarding claims 13, 24, 36, 48, Hegde et al. and Robert et al. fail to disclose the method, apparatus and network of claimed further comprising: selecting a port reserved for MDLs; transferring data on the port reserved for MDLs during the current cycle; selecting a port reserved for FDLs; and transferring data on the port reserved for FDLs during the current cycle. Carr et al. disclose the limitation of selecting a port reserved for MDLs (Fig. 1, Fig. 2, element 5, loop Maintenance operation system as a port reserved for MDLs); transferring data on the port reserved for MDLs during the current cycle (column 5, lines 29 – 29 – 38); selecting a port reserved for FDLs (Fig. 1 and Fig. 2, element 7, loop facility assignment control system as a port reserved for FDLs); and transferring data on the port reserved for FDLs during the current cycle (column 5, lines 29 – 38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hegde et al. and Robert et al. to include method, apparatus and network of claimed selecting a port reserved for MDLs; transferring data on the port reserved for MDLs during the current cycle; selecting a port reserved for FDLs; and transferring data on the port reserved for FDLs during the current cycle such as that taught by Carr selecting a port reserved for MDLs (Fig. 1, Fig. 2, element 5, loop Maintenance operation system as a port reserved for MDLs); transferring data on the port reserved for MDLs during the current cycle (column 5, lines 29 – 29 – 38); selecting a port reserved for FDLs (Fig. 1 and Fig. 2, element 7, loop facility assignment control system as a port reserved for FDLs); and transferring data on the port reserved for FDLs during the current cycle (column 5, lines 29 – 38)et al. in order to provide arrangements for provisioning service for a telecommunications customer (as suggested by Carr et al., see column 1, lines 10 –11).

Allowable Subject Matter

12. Claims 10, 37 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Prior art of record, in single or in combination, do not disclose implicitly or explicitly reducing the overshoot value for the first port by a number of bytes transferred by the first port during the current cycle less than the predetermined number of bytes less the overshoot value for the first port; and upon determining that the reducing would cause the overshoot value for the first port to become negative, adding the predetermined number of bytes to the overshoot value for the first port.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to

the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACL

Sep 19, 2006

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER